



REPLY TO  
ATTENTION OF

DACS-SF

DEPARTMENT OF THE ARMY  
OFFICE OF THE CHIEF OF STAFF  
200 ARMY PENTAGON  
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13 JAN 1993

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Notification of DDESB for Explosives and Chemical Agent Mishaps

1. Reference:

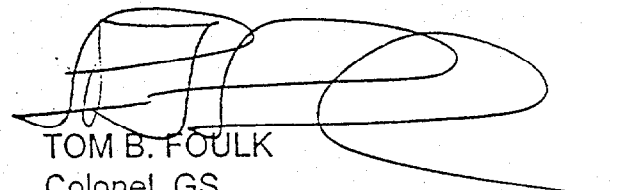
- a. DODI 6055.7, Mishap Investigation, Reporting, and Recordkeeping.
- b. DoD 6055.9-STD, DoD Ammunition and Explosives Safety Standards.
- c. DoD Instruction 0-7730.12, Notification Procedures for Accidents and Significant Incidents Involving Nuclear Weapons, Reactors, and Radioactive Materials.
- d. AR 385-40, Accident Reporting and Records.

2. It is Army policy that notification and reporting of explosives and chemical agent mishaps be made in accordance with DoD requirements in a timely manner. References a and b require that DDESB receive notification of serious mishaps involving ammunition and explosives. These requirements are in addition to those contained in reference d. Requirements and procedures for notifying DDESB of ammunition and explosives mishaps are enclosed.

3. The point of contact for reporting explosives mishaps to DDESB is the Director, U.S. Army Technical Center for Explosives Safety. The point of contact for reporting chemical mishaps to DDESB is the Office of the Director of Army Safety. Responsibilities for mishap notification and reporting are delineated in the enclosed guidance.

4. Point of contact on this matter is Jim Patton, 703/695-7291.

Encl

  
TOM B. FOULK  
Colonel, GS  
Deputy Director of Army Safety

DACS-SF

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DISTRIBUTION:

Commander in Chief, U.S. Army, Europe and 7A, ATTN: AEAGA-S,  
Heidelberg, FRG, APO AE 09014

Commander:

U.S. Forces Command, ATTN: AFPI-SO, Fort McPherson, GA 30330-6000

U.S. Army Materiel Command, ATTN: AMCSF, 5001 Eisenhower Avenue, Alexandria,  
VA 22333-0001

U.S. Army Space and Strategic Defense Command, ATTN: CSSD-SA-S,  
P.O. Box 1500, Huntsville, AL 35807-3801

U.S. Army Corps of Engineers, ATTN: CESO-E, WASH DC 20314-1000

U.S. Army Training and Doctrine Command, ATTN: ATBO-S, Fort Monroe, VA  
23651-5000

U.S. Army Military Traffic Management Command, ATTN: MTCS-SO, 5611 Columbia  
Pike, Falls Church, VA 22041-5050

U.S. Army Medical Command, ATTN: MCSM, Fort Sam Houston, TX 78234-6000

Eighth U.S. Army, ATTN: EASF, Seoul, Korea, APO AP 96205-0009

U.S. Army Pacific, ATTN: APPE-SA, Fort Shafter, Honolulu, HI 96858-5100

U.S. Army Military District of Washington, ATTN: ANOS, Bldg 41, Fort Leslie J. McNair,  
Washington, DC 20319-5050

U.S. Army South, ATTN: SOSF, APO AA 34004-5000

U.S. Army Special Operations Command, ATTN: AOOS, Fort Bragg, NC 28307-5200

U.S. Army Intelligence and Security Command, ATTN: IAPER-HS, 8825 Beulah Street,  
Fort Belvoir, VA 22060-5246

U.S. Army Criminal Investigation Command, ATTN: CISP-SA, 5611 Columbia Pike,  
Falls Church, VA 22041-5015

Chief, National Guard Bureau, Army Aviation and Safety Directorate, Arlington Hall  
Readiness Center, ATTN: NGB-AVN-S, 111 South George Mason Drive, Arlington,  
VA

U.S. Army Safety Center, ATTN: CSSC-Z, Fort Rucker, AL 36362-5363

Director, U.S. Army Technical Center for Explosives Safety, ATTN: SIOAC-EST,  
Savanna, IL 61074-9639

## Notification of DDESB for Explosives and Chemical Agent Mishaps

### Definitions

Chemical agent - A chemical compound intended for use in military operations to kill, seriously injure, or incapacitate persons through its chemical properties. Excluded are riot control agents, chemical herbicides, smoke, and flame. Pesticides, insecticides, and industrial chemicals, unless selected by DoD components for chemical warfare purposes, are also excluded.

Chemical agent mishap - Any unintentional or uncontrolled release of a chemical agent when:

- reportable damage occurs to property from contamination, or costs are incurred for decontamination
- individuals exhibit physiological symptoms of agent exposure
- the agent quantity released to the atmosphere is such that a serious potential for exposure is created by exceeding the applicable maximum allowable concentration-time levels for exposure of unprotected workers or the general population.

Explosives mishap - An unplanned explosion or functioning of explosive material or devices (except during combat). This includes inadvertent actuation, jettisoning, and releasing or launching explosives devices. It also includes mishaps that result from off-range impacts of ordnance. For mishap reporting purposes, dummy (inert) ordnance shall be considered as an explosive device any time it is used in training or test situations to simulate an actual item.

Explosives - All items of ammunition; propellants, liquid and solid; high and low yield explosives; pyrotechnics; and substances associated with the foregoing that present real and potential hazards to life or property. The term includes any device or assembly of devices that contains an explosive material. Examples are bombs, guided or unguided; water and land mines; depth charges; non-nuclear warheads; explosive-loaded projectiles; explosive components of aircrew escape systems; missile propellants; unguided missiles; pyrotechnic, illuminating, and signaling devices; and cartridge-actuated tools, such as stud drivers.

### Responsibilities

1. Commanders of installations and activities with an explosives or chemical agent

mission will--

a. Ensure explosives and chemical agent mishaps are investigated in accordance with requirements in AR 385-40 and reported to the U.S. Army Safety Center within appropriate time requirements. When forwarding explosives and chemical agent mishap investigation reports to the U.S. Army Safety Center, two copies shall be provided. The copies shall be forwarded with a memorandum requesting one copy be forwarded, via the Office of the Director of Army Safety, to the Department of Defense Explosives Safety Board (DDESB).

b. Ensure notification (during duty hours) of explosives mishaps is made to the U.S. Army Technical Center for Explosives Safety. Ensure notification (during duty hours) of chemical agent mishaps in accordance with chemical event reporting requirements of AR 50-6.

c. Ensure a follow-up report for explosives mishaps is made to the U.S. Army Technical Center for Explosives Safety within two workdays of initial notification. Ensure a follow-up report for chemical agent mishaps is made to the Office of the Director of Army Safety within two workdays of initial notification.

2. The Army Safety Center, as the repository of accident reports, is responsible for forwarding one copy of explosives and chemical agent mishap investigation reports to the Office of the Director of Army Safety.

3. The Office of the Director of Army Safety will--

a. Provide notification (during duty hours) of chemical agent mishaps to the Chairman, DDESB.

b. Provide a follow-up report for chemical agent mishaps, within two workdays of initial notification, to the Chairman, DDESB.

c. Provide a copy of explosives and chemical agent mishap investigation reports to the Chairman, DDESB.

4. The U.S. Army Technical Center for Explosives Safety will--

a. Provide notification (during duty hours) of explosives mishaps to the Chairman, DDESB.

b. Provide a follow-up report for explosives mishaps, within two workdays of initial notification, to the Chairman, DDESB.

## Requirements for Notification

1. An initial telephonic report to the Office of the Director of Army Safety and to the U.S. Army Technical Center for Explosives Safety is required for explosives and/or chemical agent mishaps resulting in one or more of the following:
  - a. DoD military, civilian, or contractor fatality.
  - b. \$200,000 or more property damage.
  - c. Production loss of 72 hours or more.
  - d. Loss of major weapons system (e.g., tank, aircraft, ship, or large missile).
  - e. Probable public interest such as network media coverage.
2. A message to the Office of the Director of Army Safety and to the U.S. Army Technical Center for Explosives Safety is required for explosives and/or chemical mishaps resulting in one or more of the following:
  - a. \$10,000 or more property damage.
  - b. Production interruption exceeding 24 hours.
  - c. Individuals exhibiting physiological symptoms of agent exposure.
  - d. An unintentional or uncontrolled release of a chemical agent where the agent quantity released to the atmosphere is such that a serious potential for exposure is created by exceeding the applicable maximum allowable agent concentration-time levels for exposure of unprotected workers or the general population.
3. Telephonic and electrically transmitted reports shall be provided as soon as possible and shall include as much of the following data as may be immediately available.
  - a. Name and location of reporting activity.
  - b. Name, title, and telephone number of person reporting and of contact at scene of the accident.
  - c. Location of the mishap (activity, city, installation, building number or designation, road names, or similar information).
  - d. Item nomenclature (Mk, Mod, FSC FIIN, DODAC, or NALC).
  - e. Quantity involved (number of items and NEW).
  - f. Day, date, and local time of initial significant event and when discovered.
  - g. Description of significant events (include type of operation involved).
  - h. Number of fatalities (military, DoD civilian, or other civilian) and persons injured.
  - i. Description and cost of material damage (government or non-government).
  - j. Cause.
  - k. Action planned or taken (corrective, investigative, or EOD assistance).
  - l. Effect on production, operation, mission, or other activity.
  - m. Details of any remaining chemical agent hazard or contamination, if applicable.
  - n. Are any news media aware (yes or no).

## Follow-up Reports

Follow-up reports shall be submitted to DDESB by way of priority-precedence, electronically-transmitted message within 2 workdays after notification of an occurrence has been received and shall contain any additional information on the data elements contained in paragraph 3, above.

## Investigation Reports

1. An investigation report shall be submitted to the Army Safety Center as soon as the investigating board has obtained release from the DoD component concerned for all explosives and/or chemical mishaps meeting the criteria listed above. (Mishaps occurring during the transportation of ammunition, explosives and chemical agents by commercial carriers are excluded from this requirement unless so directed by contract.)
2. The following mishaps, although not required to be reported, shall be reported whenever the information to be obtained can contribute to the development or verification of safety procedures or standards:
  - a. A nuclear weapon accident or nuclear weapon significant incident shall be reported in accordance with DoD Instruction 0-7730.12. However, the investigation resulting from a mishap that involves the non-nuclear explosive components of such a weapon or device should be provided to Office of the Director of Army Safety to forward to the Chairman, Department of Defense Explosives Safety Board, to aid in the development or verification of high explosive safety procedures and standards.
  - b. An unplanned explosion, fire, or functioning of ammunition and explosives that does not meet the requirements of paragraphs 1 or 2 under the section "Requirements for Immediate Notification," for mandatory reporting when in the opinion of the investigating officer it produces data that may be of permanent value in evaluating explosives or chemical agent safety.
  - c. A mishap relating to the employment of ammunition, explosives, or chemical agents during combat.
  - d. Accidental and deliberately inflicted gunshot wounds from small arms handling, test firing operations, and similar incidents that result from personnel error, inadequate training, or malfeasance.
3. The following information, as applicable, shall be included in investigation reports.
  - a. Event circumstances.
    - Location, date, and local time.

- Type of operation or transportation mode engaged in at time of the mishap (include reference to applicable standing operating procedure or regulatory document).
- Description of mishap.
- Quantity, type, lot number, configuration, and packaging of ammunition, explosives, or chemical agent involved in the mishap.
- Type of reaction(s): single reaction (such as detonation, deflagration, fire, release, or activation); multiple reaction (such as detonation and fire); communication of reactions, such as fire caused fire, fire caused detonation, and detonation caused detonation, and the time between events.
- Possible or known causes.

b. Event effects. A copy of aerial and ground photographs taken of the mishap site. When appropriate, include photographs (color whenever possible), maps, charts, and overlays, showing or listing the following.

- Number of persons killed or injured. Indicate cause of fatalities and injuries and location of affected persons with respect to the mishap origin.
- Property damage at the mishap origin.
- Area containing property with more than 75% destruction.
- Area containing property damage beyond economical repair (50 to 75%).
- Area containing repairable property damage (1 to 49%). Indicate event origin and a description of the damage and its cause.
- Radii of uniform and of irregular glass breakage (when possible, include type and dimensions of glass broken at farthest point).
- Locations and dimensions of craters.
- Distances from the mishap origin at which direct propagation occurred and whether from blast, fragments, or firebrands.
- Approximate number, size, and location of hazardous fragments and debris.

c. Factors contributing to or limiting event effects. When appropriate, describe the influence of the following factors on the mishap.

- Environmental and meteorological (such as cloud cover, wind direction and velocity, temperature, relative humidity, electromagnetic radiation, and electrostatic buildup and/or discharge).
- Topography (such as hills, forests, lakes).
- Structural features at the mishap origin (such as exterior and interior walls and bulkheads, roofs and overheads, doors and hatches, cells or magazines, earth cover, and barricades).
- Safety features, other than structural, at the mishap origin (such as remote controls, sprinklers or deluge systems, detectors, alarms, blast traps, and suppressive shielding).

- Structures. Position, orientation, and type of construction of all structures, damaged or not, located within the maximum radius of damage. When either the intermagazine, intraline, or inhabited building distances are greater than the radius of actual damage, show the location, orientation, and type construction of all structures situated within the Q-D radii.

- Vessels, vehicles, and mobile equipment. Location within maximum radius of damage, or if the Q-D requirements are greater, location within the K9, K18, K24, and K30 Q-D radii.

- Personnel. Location within maximum radius of damage, or if the Q-D requirements are greater, location within the K9, K18, K40, and K50 Q-D radii.

- Explosives, amounts, and chemical agent. Location, type, configuration, amounts, and protection provided within maximum radius of damage, or if the Q-D requirements are greater, location within the applicable magazine and intraline radii.

d. Analyses, conclusions, and recommendations.

e. For chemical agent mishaps, include the following.

- The safety training that personnel received applicable to duty being performed at the time of the mishap.

- The availability, type, and use of protective equipment.

- A description of the emergency measures taken or performed by individuals at the scene of the mishap.

- A summary of applicable medical data.

- A sketch showing locations where disabling injuries occurred, and indicating the distance and direction from the agent source.

- The facility filter types and the facility ventilation and air turnover rates.

- The rate and manner of agent releases and any data used to determine the downwind hazard.

- The status and disposition of chemical agent remaining at the mishap.

- The details of any remaining chemical agent hazard and contamination, if applicable.